

1 Corrigendum for
2 “A temporal kernel method to compute effective radiative forcing in CMIP5
3 transient simulations”
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The mathematical description in section 4 of Larson and Portmann (2016) incorrectly uses forcing in the equations when it should use delta forcing. Specifically this variable is used in equations 2, 3, and 5. Here, F_j , described as the forcing in year j , should be described as the change in forcing between year $j-1$ and j . The actual radiative forcing is the cumulative summation of these changes. This error does not affect any results or conclusions from the paper. It is simply an error in representing the equations in the manuscript.

The correct forms of equations 2, 3, and 5, respectively, from Larson and Portmann (2016) are

$$y_i = \sum_{j=0}^i x_j \frac{\Delta F_{i-j}}{F_0} = y_i = \sum_{j=0}^i x_{i-j} \frac{\Delta F_j}{F_0}$$

$$\mathbf{Y} = \mathbf{X}\Delta\mathbf{F}/F_0$$

$$\Delta\mathbf{F} = F_0\mathbf{X}^{-1}\mathbf{Y}.$$

The only difference is the change from F to ΔF , where ΔF_j is the change in forcing between year j and $j-1$. The forcing time series, F , is the cumulative summation of the changes in forcing ΔF

$$F_i = \sum_{j=0}^i \Delta F_j.$$

References

37 Larson, E.J.L. and R.W. Portmann, 2016: A temporal kernel method to compute
38 effective radiative forcing in CMIP5 transient simulations. *J. Climate*, **29**, 1497-1509,
39 doi: 10.1175/JCLI-D-15-0577.1.